300 Rec'd PCT/PTO 23 DEC 1998

DOCKET NO.: TER-004.2P

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Applica	ation of:)	Art Unit:	unknown	
	Fuhrmann, et al.)	Examiner:	unknown	
Serial No.:	unknown)	Docket No.:	TER-004.2P	
Filed:	12/23/98)			
For: DATA	A TRANSMISSION USING AT	M OVER HY	BRID FIBER COA	4X	

Honorable Commissioner of Patents and Trademarks Washington, D.C. 20231

INFORMATION DISCLOSURE STATEMENT

Sir:

Pursuant to 37 C.F.R. §§1.97-1.98, the undersigned would like to make the following prior art references of record in the above-identified patent application. The undersigned believes that some of these references may be material to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 C.F.R. §1.56.

While this Information Disclosure Statement may contain material information pursuant to 37 C.F.R. §1.56, it is not intended to constitute an admission that any individual reference referred to herein is prior art to the invention disclosed and claimed in the above-identified patent application.

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evaluation to arrive at an independent assessment of its relevance and materiality, if any, to the claimed subject matter.

Cited Art

Pursuant to 37 CFR 1.97, applicants are bringing to the attention of the Examiner all the art cited in the parent case 08/760,412 which, by preliminary amendment amending the specification in the instant case to claim the priority of said parent case and rely on it for an earlier filing date under 35 USC Section 120.

The first references cited are from an office action from the U.S.P.T.O. Dated 09/02/98 on Patent Application No. 08/760,412. PTO-892 form is attached.

Eight (8) references are cited from the Information Disclousre Statement sent to the U.S.P.T.O. on Patent Application No. 08/760,412 on March 11, 1998. Copies of Form PTO-1449 and the Information Disclosure Statement are attached.

Three (3) references are cited from the Information Disclosure Statement sent to the U.S.P.T.O. On Patent Application No. 08/760,412 on October 1, 1997. Copies of Form PTO-1449 and the Information Disclosure Statement are attached.

Nine (9) references are cited from the Information Disclosure Statemeth sent to the U.S.P.T.O. On Patent Application No. 08/760,412 on June 14, 1997. Copies of Form PTO-1449 and the Information Statement are attached.

Fifty-six (56) references are cited from the Information Disclosure Statement sent to the U.S.P.T.O. On Patent Application No. 08/760,412 on May 21, 1997. Copies of Form PTO-1449 and the Information Statement are attached.

Respectfully submitted,

Dated: <u>「2/23/98</u>

Ronald Craig Fish Reg. No. 28,843

Attorney for Applicant(s)

hereby certify that this correspondence is being deposited with the United States Postal Service as Express Mail in an envelope addressed:Commissioner of Patents and Trademarks, Washington D.C. 20231 on (Date Of Deposit) <u>December 23, 1998</u>

Express Mail Receipt Number: EM429087497US

Ronald Craig Fish, President

Ronald Craig Fish a Law Corporation

Notice of References Cited Examiner Frank Duong Group Art Unit Page 1 of 1			_	Application No. 08/760,4		Applicant(s)	Raki	ib		
DOCUMENT NO. DATE		Notice of Refe	rences Cited						Page 1 of 1	
A 5,715,250 02/03/98 Watanabe 370 395 B 5,745,837 04/28/98 Fuhrmann 348 12 C 5,777,994 07/07/98 Takihiro et al. 370 395 D 5,050,166 09/17/91 Cantoni et al. 370 473 E			U.	S. PATENT DOCUM	ENTS					
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D 5,050,166 09/17/91 Cantoni et al. 370 473 E	В	5,745,837	04/28/98		Fuhrman	in		348	12	
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DOCKET NO .: TER-004.1P

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re A	In re Application of:))	Art Unit:	2603
		FUHRMANN))	Examiner:	unknown
Serial I	No.:	08/760,412))	Docket No.:	TER-004.1P
Filed:		December 4, 1996))		
For:		OVERHEAD METHOD FOR DAT	A TRAN	ISMISSION USIN	G ATM AND SCDMA OVER

Honorable Commissioner of Patents and Trademarks Washington, D.C. 20231

INFORMATION DISCLOSURE STATEMENT

Sir:

Pursuant to 37 C.F.R. §§1.97-1.98, the undersigned would like to make the following prior art references of record in the above-identified patent application. The undersigned believes that these references may be material to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 C.F.R. §1.56.

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PATENT

DOCKET NO.: TER-004.1P

the express purpose of providing the examiner with an opportunity to perform an independent evaluation to arrive at an independent assessment of its relevance and materiality, if any, to the claimed subject matter.

Cited Art

Majeti, et al., U.S. Patent 5,488,412, Patent Issued Jan. 30, 1996, Filed Mar. 31, 1994; Majeti, et al., U.S. Patent 5,512,935, Patent Issued Apr. 30, 1996, Filed Mar. 31, 1994; Majeti, et al., U.S. Patent 5,534,913, Patent Issued Jul. 9, 1996, Filed Mar. 31, 1994; Moura, et al., U.S. Patent 5,586,121, Patent Issued Dec. 17, 1996, Filed Apr. 21, 1995; Kawano, et al., U.S. Patent 5,594,872, Patent Issued Jan. 14, 1997, Filed Apr. 26, 1994; Carr. et al., U.S. Patent 5,608,446, Patent Issued Mar. 4, 1997, Filed May 9, 1995; Ulm. et al., U.S. Patent 5,608,728, Patent Issued Mar. 4, 1997, Filed Apr. 13, 1995; Taylor, et al., U.S. Patent 5,619,531, Patent Issued Apr. 8, 1997, Filed Nov. 14, 1994.

Respectfully submitted,

Dated: MARCH 11, 1998

Ronald Craig Fish Reg. No. 28,843

Attorney for Applicant(s)

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington D.C. 20231 on MARCH 11, 1998.

(Date Of Deposit)

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FORM PTO-1449 (Rev. 2-32)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. TER-004.1P	SERIAL NO. 08/760,412			
	ORMATION DISCLOSURE TEMENT BY APPLICANT	APPLICANT FUHRMANN, et al.				
(USE	SEVERAL SHEETS IF NECESSARY)	FILING DATE December 4, 1996	GROUP 2603			

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	CLASS	FILING DATE IF APPROP.
A	5,488,412	Jan 30, 1996	Majeti, et al.	348	10	Mar 31, 1994
В	5.512.935	Apr 30, 1996	Majeti, et al.	348	9	Mar 31, 1994
С	5,534,913	Jul 9, 1996	Majeti, et al.	348	7	Mar 31, 1994
D	5,586,121	Dec 17, 1996	Moura, et al.	370	404	Apr 21, 1995
E	5,594,872	Jan 14, 1997	Kawano, et al.	395	200.15	Apr 26, 1994
F	5,608,446	Mar 4, 1997	Carr, et al.	348	6	May 9, 1995
G	5,608,728	Mar 4, 1997	Ulm, et al.	370	488	Apr 13, 1995
Н	5,619,531	Apr 8, 1997	Taylor, et al.	375	222	Nov 14, 1994
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EXAMINER INITIAL	DOCUMENT NUMBER	PUB. DATE	COUNTRY	CLASS	SUBCLASS	TRANS	LATION
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DOCKET NO .: TER-004.1P

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)	Art Unit:	2603	
		FUHRMANN)	Examiner:	unknown
Serial N	lo.:	08/760,412)	Docket No.:	TER-004.1P
Filed:		December 4, 1996))		
For:	LOWEF HYBRI[OVERHEAD METHOD FOR DAT FIBER COAX CABLE PLANT	TA TRAN	NSU NOISSIMEN	NG ATM AND SCDMA OVER

Honorable Commissioner of Patents and Trademarks Washington, D.C. 20231

INFORMATION DISCLOSURE STATEMENT

Sir:

Pursuant to 37 C.F.R. §§1.97-1.98, the undersigned would like to make the following prior art references of record in the above-identified patent application. The undersigned believes that these references may be material to the examination of this application and in respect of which there may be a duty to disclose in accordance with 37 C.F.R. §1.56.

While this Information Disclosure Statement may contain material information pursuant to 37 C.F.R. §1.56, it is not intended to constitute an admission that any individual reference referred to herein is prior art to the invention disclosed and claimed in the above-identified patent application.

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PATENT

DOCKET NO .: TER-004.1P

the express purpose of providing the examiner with an opportunity to perform an independent evaluation to arrive at an independent assessment of its relevance and materiality, if any, to the claimed subject matter.

Cited Art

Giallorenzi, et al., U.S. Patent 5,583,853, Patent Issued Dec. 10, 1996, Filed Nov. 28, 1995;

R. De Gaudenzi, et al., "Performance Evaluation of Quasi-Synchronous Code Divison Multiple

Access (QS-CDMA) for Satellite Mobile Systems," GLOBECOM '90: IEEE Global

Telecommunications Conference, 1800-1804;

R. Lupas, et al., "Linear Multiuser Detectors for Synchronous Code Division Multiple Access Channels," IEEE Transactions on Information Theory, Vol. 35, Issue 1, pgs. 123-136.

Respectfully submitted,

Dated:	- (007	1997

Ronald Craig Fish Reg. No. 28,843

Attorney for Applicant(s)

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner of Patents and Trademarks, Washington D.C. 20231 on 10 C 7 1997

D.C. 20231 on ______ (Date Of Deposit)

Ronald Craig Fish, President

Ronald Craig Fish a Law Corporation



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SHEET 1 OF 1

FORM PTO-1449 (Rev. 2-32)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. TER-004.1P	SERIAL NO. 08/760,412
INF	ORMATION DISCLOSURE TEMENT BY APPLICANT	RPPLICANT FUHRMANN	
(USE	SEVERAL SHEETS IF NECESSARY)	FILING DATE December 4, 1996	GROUP 2603

ILS PATENT DOCUMENTS

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EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	CLASS	FILING DATE IF APPROP.
Α	5,583,853	12/10/1996	Giallorenzi, et al.	370	441	11/28/95
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

EXAMINER INITIAL		
	S	R. De Gaudenzi et al., "Performance Evaluation of Quasi-Synchronous Code Division Multiple Access (QS-CDMA) for Satellite Mobile Systems," GLOBECOM '90: IEEE Global Telecommunications Conference, 1800-1804. (04/1990)
	T	R. Lupas et al., "Linear Multiuser Detectors for Synchronous Code Division Multiple Access Channels," IEEE Transactions on Information Theory, Vol. 35, Issue 1, pgs. 123-136. (01/1989)
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DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

09/214158

300 Rec'd PCT/FTO 23 DEC 1998

DOCKET NO.: TER-004.1P

PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re A	pplicatio	n of:)	Art Unit:	2603
		FUHRMANN)	Examiner:	unknown
Serial I	No.:	08/760,412)	Docket No.:	TER-004.1P
Filed:		December 4, 1996))		
For:		OVERHEAD METHOD FOR DA FIBER COAX CABLE PLANT	TA TRAN	NSU NOISSIME	G ATM AND SCDMA OVER

Honorable Commissioner of Patents and Trademarks Washington, D.C. 20231

INFORMATION DISCLOSURE STATEMENT

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DOCKET NO.: TER-004.1P

the express purpose of providing the examiner with an opportunity to perform an independent evaluation to arrive at an independent assessment of its relevance and materiality, if any, to the claimed subject matter.

Cited Art

Bustini, et al., U.S. Patent 5,313,454, Patent Issued May 17, 1994, Filed Apr. 1, 1992; Longston, et al., U.S. Patent 5,467,342, Patent Issued Nov. 14, 1995, Filed Oct. 5, 1994; English, et al., U.S. Patent 5,305,308, Patent Issued Apr. 19, 1994, Filed Oct. 29, 1992; Schmidt, U.S. Patent 4,748,681, Patent Issued May 31, 1998, Filed Apr. 28, 1986; Gudmundson, et al., U.S. Patent 5,295,152, Patent Issued Mar. 15, 1994, Filed Apr. 10, 1992;

Snell et al., U.S. Patent 5,442,700, Patent Issued Aug. 15, 1995, Filed Sep. 22, 1994;

Hoarty, et al., U.S. Patent 5,557,316, Patent Issued Sep. 17, 1996, Filed Sep. 29, 1994;

Miller, U.S. Patent 5,511,067, Patent Issued Apr. 23, 1996, Filed Jun. 17, 1994;

Su, et al., U.S. Patent 5,398,258, Patent Issued Mar. 14, 1995, Filed Oct. 26, 1993.

Dated: $\frac{6/14/97}{}$

Respectfully submitted,

Ronald Craig Fish Reg. No. 28,843

Attorney for Applicant(s)

(Date Of Deposit)

Ronald Craig Fish, President

Ronald Craig Fish a Law Corporation

300 Rec'd PCT/PTO 23 DEC1998 SHEET 1 OF 1

FORM PTO-1449 (Rev. 2-32)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	RTTY. DOCKET NO. TER-004.1P	SERIAL NO. 08/760,412
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		APPLICANT FUHRMANN	
(USE	SEVERAL SHEETS IF NECESSARY)	FILING DATE December 4, 1996	GROUP 2603

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EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	CLASS	FILING DATE IF APPROP.
Α	5,313,454	May 17, 1994	Bustini, et al.	370	13	Apr. 1, 1992
В	5,467,342	Nov. 14, 1995	Longston, et al.	370	17	Oct. 5, 1994
С	5,305,308	Apr. 19, 1994	English, et al.	370	32.1	Oct. 29, 1992
D	4.748,681	May 31, 1998	Schmidt	455	33	Apr. 28, 1986
Ε.	5,295,152	Mar. 15, 1994	Gudmundson, et al.	375	1	Apr. 10, 1992
F	5,442,700	Aug. 15, 1995	Snell, et al.	380	15	Sep. 22, 1994
G	5,557,316	Sep. 17, 1996	Hoarty, et al.	348	7	Sep. 29, 1994
н	5,511,067	Apr. 23, 1996	Miller	370	18	Jun. 17, 1994
ı	5,398,258	Mar. 14, 1995	Su, et al.	375	200	Oct. 26, 1993
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FOREIGN PATENT DOCUMENTS

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

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DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

300 Rec'd PG/PTO 23 DEC 1998

DOCKET NO.: TER-004.1P

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re A	pplication	on of:)	Art Unit:	2603	
		FUHRMANN).).	Examiner:	unknown	
Serial	No.:	08/760,412) }	Docket No.:	TER-004.1P	
Filed:		December 4, 1996))			
For:		OVERHEAD METHOD FOR DAT FIBER COAX CABLE PLANT	Á TRAN	ISMISSION USIN	IG ATM AND SCDMA OVER	

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DOCKET NO.: TER-004.1P PATENT

the express purpose of providing the examiner with an opportunity to perform an independent evaluation to arrive at an independent assessment of its relevance and materiality, if any, to the claimed subject matter. This art has been previously cited in a prior U.S. parent application Serial No. 08/616,071; Filed 03/14/96 so no copies of this art are submitted herewith.

Cited Art

Pidgeon, Jr. et al., U.S. Patent 4,912,721. Filed Apr. 29, 1988, Patent Issued Mar. 27, 1990: This important patent describes a system for sending digital data on a cable TV system using direct sequence code division multiple access. The patent discloses synchronized generation of pseudorandom noise sequences which are multiplied by the data to be spread in an exclusive OR gate. The result is then multiplied by a carrier in another exclusive OR gate. A microprocessor controls the power output of the final stage power amplifier and turns the carrier oscillator on and off and controls generation of the PN sequence. The microprocessor also supplies the data to be spread to the first exclusive OR gate.

Beyers, II et al., U.S. Patent 5,235,619, Filed March 20, 1990, Patent Issued Aug. 10, 1993:

Teaches a system for upstream communication from multiple users on a cable TV system to a billing computer process at the head end using code division multiple access. Billing information for events purchased by a subscriber is collected in this manner. Upstream data is sent by selecting a plurality of data channels over which to send upstream data, selecting a plurality of times to transmit at least one of which is random for transmitting over the plurality of channels, and transmitting the data message over each of the plurality of data channels at the transmit times.

Viterbi, et al., U.S. Patent 5,442,627, Patent Issued Aug. 15, 1995, Filed Jun. 24, 1993;

Rice, U.S. Patent 5,452,328, Patent Issued Sep. 19, 1995, Filed Jul. 30, 1993;

Vander Mey, et al., U.S. Patent 5,090,024, Patent Issued Feb. 18, 1992, Filed Aug. 23, 1989; Lien, et al., U.S. Patent 4,933,930, Patent Issued Jun. 12, 1990, Filed Oct. 31, 1988; Bremer et al., U.S. Patent 5,448,555, Patent Issued Sep. 5, 1995, Filed Jun. 14, 1993; Charas et al., U.S. Patent 5,404,570, Patent Issued Apr. 4, 1995, Filed Nov. 23, 1992; Partridge, III, U.S. Patent 5,440,585, Patent Issued Aug. 8, 1995, Filed Jun. 14, 1993; Nienaber, U.S. Patent 4,723,164, Patent Issued Feb. 2, 1988, Filed Jun. 28, 1985; Schaffner et al., U.S. Patent 5,418,813, Patent Issued May 23, 1995, Filed Dec. 6, 1993; Weaver, U.S. Patent 4,926,130, Patent Issued May 15, 1990, Filed Jan. 19, 1988; Bruckert, U.S. Patent 5,325,394, Patent Issued Jun. 29, 1993, Filed Mar. 3, 1993; Kirkman, et al. U.S. Patent 4,773,066 Filed April 15, 1986, Patent Issued September 20, 1988;

Manno, U.S. Patent 4,811,365, Patent Issued Mar. 7, 1989, Filed Nov. 7, 1986;

Baran, U.S. Patent 5,425,027, Patent Issued Jun. 13, 1995, Filed Jan. 4, 1993;

Eizenhofer, et al., U.S. Patent 4,688,210, Patent Issued Aug. 18, 1987, Filed Mar. 18, 1986;

Dent, U.S. Patent 5,539,730, Patent Issued Jul. 23, 1996, Filed Jan. 11, 1994;

Leppanen, U.S. Patent 5,533,013, Patent Issued Jul. 2, 1996, Filed Apr. 11, 1995;

Honig et al., U.S. Patent 5,481,533, Patent Issued Jan. 2, 1996, Filed May 12, 1994;

Rohani, et al., U.S. Patent 5,390,166, Patent Issued Feb. 14, 1995, Filed Jul. 14, 1993;

Kotzin, et al., U.S. Patent 5,363,404, Patent Issued Nov. 8, 1994, Filed Jul. 13, 1993;

Marston, U.S. Patent 5,345,439, Patent Issued Sep. 6, 1994, Filed Apr. 23, 1993;

Moura, et al., U.S. Patent 5,347,304, Patent Issued Sep. 13, 1994, Filed Jul. 28, 1993;

Ricketts, U.S. Patent 4,475,208, Patent Issued Oct. 2, 1984, Filed Jan. 18, 1982;

Kubota, et al., U.S. Patent 4,635,274, Patent Issued Jan. 6, 1987, Filed Apr. 25, 1985,

Fukasawa, et al., U.S. Patent 5,463,660, Filed August 3, 1994, Patent Issued October 31,1995;

DOCKET NO.: TER-004.1P PATENT

Fukasawa, et al. U.S. Patent 5,442,662 Filed June 16, 1994, Patent Issued August 15, 1995: Lee, U.S. Patent 5,414,699 Filed September 27,1993, Patent Issued May 9, 1995: Lee, U.S. Patent 5,345,472 Filed August 2, 1993, Patent Issued September 6, 1994: Lee, et al. U.S. Patent 5,297,162 Filed June 4, 1993, Patent Issued March 22, 1994: De Gaudenzi, et al. U.S. Patent 5,327,455 Filed March 18, 1993, Patent Issued July 5, 1994: Bartholomew, et al. U.S. Patent 5,319,634 Filed October 7, 1991, Patent Issued June 7, 1994: Gilhousen, et al. U.S. Patent 5,416,797 Filed January 24, 1992, Patent Issued May 16, 1995: Citta, U.S. Patent 4.554.579 Filed September 6, 1984, Patent Issued November 19, 1985; Citta, U.S. Patent 4,553,161 Filed September 6, 1984, Patent Issued November 12, 1985; Bestler, et al. U.S. Patent 5,231,664 Filed November 14, 1991, Patent Issued July 27, 1993: Dent. U.S. Patent 5,239,557 Filed April 10,1992, Patent Issued August 24,1993: Gutleber, U.S. Patent 4,460,992 Filed November 4, 1982, Patent Issued July 17, 1984 Schilling, et al. U.S. Patent 5,363,403 Filed April 22,1993, Patent Issued November 8,1994: Gutleber, U.S. Patent 4,470,138 Filed November 4,1982, Patent Issued September 4,1984: Chen, et al. U.S. Patent 5,394,391 Filed October 15, 1992, Patent Issued February 28,1995: Gitlin, et al. U.S. Patent 5,442,625 Filed May 13, 1994, Patent Issued August 15,1995: Wolf, U.S. Patent 5,233,630 Filed May 3, 1991, Patent Issued August 3, 1993: Bione, et al. U.S. Patent 4,757,460 Filed June 14,1985, Patent Issued July 12, 1988: Omura, U.S. Patent 5,235,615 Filed July 21, 1992, Patent Issued August 10,1993: Turban, U.S. Patent 5.373,502 Filed March 25, 1993, Patent Issued December 13, 1994: Lee, et al. U.S. Patent 5,353,300 Filed June 7, 1993, Patent Issued October 4,1994: Viterbi, U.S. Patent 5,193,094 Filed March 7,1990, Patent Issued March 9, 1993: Lee, et al. U.S. Patent 5,359.624 Filed June 7, 1993, Patent Issued October 25,1994; Gilhousen, et al. U.S. Patent 5,309,474 Filed March 27, 1992, Patent Issued May 3, 1994:

PATENT

DOCKET NO.: TER-004.1P

Gilhousen, et al. U.S. Patent 5,280,472 Filed March 9, 1992, Patent Issued January 18,

1994:

Lett, PCT International App. No. PCT/US95/04329, Published Oct. 26, 1995;

Jelinek, PCT International App. No. PCT/US95/10899, Published Mar. 21, 1996;

Westlaw Dialog Search.

Respectfully submitted,

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Attorney for Applicant(s)

I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope

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Ronald Craig Fish a Law Corporation

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SHEET <u>1</u> OF <u>3</u>

FORM PTO-1449 (Rev. 2-32)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. TER-004.1P	SERIAL NO. 08/760,412
	ORMATION DISCLOSURE FEMENT BY RPPLICANT	APPLICANT FUHRMANN	
(USE	SEVERAL SHEETS IF NECESSARY)	FILING DATE December 4, 1996	GROUP 2603

U.S. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	CT US Z	FILING DATE IF APPROP.
A	5,442,627	Aug. 15, 1995	Viterbi, et al.	370	22	Jun. 24, 1993
В	5,452,328	Sep. 19, 1995	Rice	375	210	Jul. 30, 1993
С	5,090,024	Feb. 18, 1992	Vander Mey, et al.	375	1	Aug. 23, 1989
D	4,933,930	Jun. 12, 1990	Lien et al.	370	18	Oct. 31, 1988
E	5,448,555	Sep. 5, 1995	Bremer et al.	370	20	Jun. 14, 1993
F	5,404,570	Apr. 4, 1995	Charas et al.	455	22	Nov. 23, 1992
G	5,440,585	Aug. 8, 1995	Partridge, III	375	261	Jun. 14, 1993
Н	4,723,164	Feb. 2, 1988	Nienaber	358	148	Jun. 28, 1985
1	5,418,813	May 23, 1995	Schaffner et al.	375	205	Dec. 6, 1993
J	4,926,130	May 15, 1990	Weaver	328	14	Jan. 19, 1988
К	5,224,122	Jun. 29, 1993	Bruckert	375	1	Jun. 29, 1992
L	5,325,394	Jun. 28, 1994	Bruckert	375	1	Mar. 3, 1993
М	4,773,066	Sep. 20, 1988	Kirkman	370	85	Apr. 15, 1986
N	4,912,721	Mar. 27, 1990	Pidgeon Jr., et al.	375	1	Apr. 29, 1988
0	5,235,619	Aug. 10, 1993	Beyers, II et al.	375	38	Mar. 20, 1990

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	PUB. DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
						YES	NO
Р	PCT/US95/10899	Mar. 21, 1996	PCT			X	
Q	PCT/US95/04329	Oct. 26, 1995	PCT			X	
R							
s				<u> </u>			

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)

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FORM PTO-1449 (Rev. 2-32)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTY. DOCKET NO. TER-004.1P	SERIAL NO. 08/760,412	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		APPLICANT FUHRMANN		
(USE	SEVERAL SHEETS IF NECESSARY)	FILING DATE December 4, 1996	GROUP 2603	

ILS. PATENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	CLASS SUB	FILING DATE IF APPROP.	
А	4,811,365	Mar 7, 1989	Manno	375	107	Nov 7, 1986	
В	5,425,027	Jun 13, 1995	Baran	370	69.1	Jan 4, 1993	
С	4,688,210	Aug 18, 1987	Eizenhofer, et al.	370	335	Mar 18, 1986	
D	5,539,730	Jul 23, 1996	Dent	370	320	Jan 11, 1994	
E	5,533,013	Jul 2, 1996	Leppanen	370	206	Apr 11, 1995	
F	5,481,533	Jan 2, 1996	Honig, et al.	375	206	May 12, 1994	
G	5,390,166	Feb 14, 1995	Rohani, et al.	370	335	Jul 14, 1993	
Н	5,363,404	Nov 8, 1994	Kotzin, et al.	370	352	Jul 13, 1993	
	5,345,439	Sep 6, 1994	Marston	370	18	Apr 23, 1993	
J	5,347,304	Sep 13, 1994	Moura, et al.	348	12	Jul 28, 1993	
К	4,475,208	Oct 2, 1984	Ricketts	375	1	Jan 18, 1982	
L.	4,635,274	Jan 6, 1987	Kubota	375	1 ·	Apr 25, 1985	
М	5,463,660	Oct. 31, 1995	Fukasawa, et al.	375	205	Aug. 3, 1994	
N	5,442,662	Aug. 15, 1995	Fukasawa, et al.	375	205	Jun. 16, 1994	
0	5,414,699	May 9, 1995	Lee	370	18	Sep. 27, 199	

FOREIGN PATENT DOCUMENTS

EHAMINER INITIRL	DOCUMENT NUMBER	PUB. DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION	
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(USE	SEVERAL SHEETS IF NECESSARY)	FILING DATE December 4, 1996	GROUP 2603	

U.S. PRTENT DOCUMENTS

EXAMINER INITIAL	DOCUMENT NUMBER	DATE	NAME	CLASS	CLASS	FILING DATE IF APPROP.
A	5,345,472	Sep. 6, 1994	Lee	375	1	Aug. 2, 1993
В	5,297,162	Mar. 22, 1994	Lee, et al.	375	1	Jun. 4, 1993
С	5,327,455	Jul. 5, 1994	De Gaudenzi, et al.	375	1	Mar. 18, 1993
D	5,319,634	Jun. 7, 1994	Bartholomew, et al.	370	18	Oct. 7, 1991
E	5,416,797	May 16, 1995	Gilhousen, et al.	375	705	Jan. 24, 1992
F	4,554,579	Nov. 19, 1985	Citta	358	86	Sep. 6, 1984
G	4,553,161	Nov. 12, 1985	Citta	358	86	Sep. 6, 1984
Н	5,231,664	Jul. 27, 1993	Bestler, et al.	380	20	Nov. 14, 1991
ı	5,239,557	Aug. 24, 1993	Dent	371	1	Apr. 10, 1992
J	4,460,992	Jul. 17, 1984	Gutleber	370	19	Nov. 4, 1982
К	5,363,403	Nov. 8, 1994	Schilling, et al.	375	1	Apr. 22, 1993
L	4,470,138	Sep. 4, 1984	Gutleber	370	18	Nov. 4, 1982
М	5,394,391	Feb. 28, 1995	Chen, et al.	370	18	Oct. 15, 1992
N	5,442,625	Aug. 15, 1995	Gitlin, et al.	370	18	May 13, 1994
0	5,233,630	Aug. 3, 1993	Wolf	375	67	May 3, 1991
Р	4,757,460	Jul. 12, 1988	Bione, et al.	364	514	Jun. 14, 1985
a	5,235,615	Aug. 10, 1993	Omura	375	1	Jul. 21, 1992
R	5,373,502	Dec. 13, 1994	Turban	370	18	Mar. 25, 1993
s	5,353,300	Oct. 4, 1994	Lee, et al.	375	1	Jun. 7, 1993
Т	5,193,094	Mar. 9, 1993	Viterbi	371	43	Mar. 7, 1990
U	5,359,624	Oct. 25, 1994	Lee, et al.	375	1	Jun. 7, 1993
V	5,309,474	May 3, 1994	Gilhousen, et al.	375	1	Mar. 27, 1992
w	5,280,472	Jan. 18, 1994	Gilhousen, et al.	370	18	Mar. 9, 1992
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